

REMARKS

Claims 1, 4-13 and 15-21 are pending in this application, of which claims 1, 11, 16 and 17 are independent.

35 U.S.C. § 103 Rejections

Claims 1, 4-9 and 16-21 were rejected under 35 USC 103(a) for obviousness over Babitch (US 5,930,719) in view of Brandt (US 4,727,535). We submit that Babitch in view of Brandt does not teach or suggest an apparatus including "level control circuitry coupled to the transmitter that controls a level of the original analog voiceband data signal to be substantially in a linear range of the transmitter," as recited in claim 1. The Examiner acknowledges that Babitch lacks this feature (Office Action, page 3).

However, the Examiner relies on Brandt to address this deficiency. We disagree.

With regard to Brandt, the Examiner stated:

Brandt teaches a coupling device acting as a telephone line interface (See fig. 1) comprising a hybrid circuit 28 for passing analog voiceband data signals between the telephone line and a coupled device; and a gain control circuit 92, 94 for controlling a level of the analog voiceband data signals passing from the hybrid circuit 28 to the coupled device to be substantially in a linear range using a DC current of a telephone loop (See figs. 1-2 and col. 3 lines 50-55, col. 5 lines 36-41).

As an initial matter, the "gain control circuit" of Brandt does not control the level of signals passing from the hybrid circuit 28 to the coupled device to be substantially in a linear range using a DC current of the telephone loop. Careful inspection of FIG. 2 of Brandt reveals that resistors 94 and 96 control the gain of the amplifier 22 according to a "REF" source, and not according to a DC signal of the telephone loop (these signals identified by reference numerals 38 and 40).

Moreover:

In effect, there are three signals which are fed to the diode 42 of the optical coupler 44. One of these is the DC quiescent signal and another is an AC signal carrying appropriate communication information from the telephone network. The DC quiescent signal is, at all times, a much stronger signal than the AC information signal. On top of this, a side tone feedback signal from the transmitter circuit 18 is also imposed onto the diode 42. As with the DC quiescent signal, this is also a strong signal of a value much greater than the AC signal which must be read and supplied to the receiver output device 24.

Because the base emitter junction of the transistor 46 is reversed bias, it is sensitive to the

corresponding optical AC signal outputted by the diode 42 even in the presence of the larger DC quiescent signal and the AC side tone signal from the transistor circuit 18.

While we do not wish to be bound by theory, since the collector of transistor 46 is open, it has no current gain and, as such, the optical signal, outputted by the diode 42 in response to the DC quiescent signal, is essentially lost, whereas the AC signal is propagated. This includes both the AC signal carrying the information inputted from the telephone network, as well as the AC side tone signal introduced into the circuit by the transmitter circuit 18 (column 5, line 49 to column 6, line 6).

In sum, the reverse bias transistor 46 effectively blocks the transmission of the DC quiescent signal, while propagating the AC signal to the amplifier 22. The resistors 94 and 96 control the gain of the AC signal and AC side tone signal, but not the gain of the DC quiescent signal. We submit, therefore, that Brandt does not control the gain of the “original” signal output from the telephone network at 38, 40.

For at least these reasons, we submit that claim 1 is allowable over Babitch in view of Brandt.

Claim 16 recites a communication interface including “a gain control circuit for controlling a level of the original analog voiceband data signals passing from the hybrid circuit to the transmitter to be substantially in a linear range of the transmitter.” For at least the reasons discussed in conjunction with claim 1, we submit that claim 16 is allowable over Babitch in view of Brandt.

Claim 17 recites a method including the step of, at a base unit, “controlling a level of the original analog voiceband data signal to be substantially in a linear range of a transmitter.” For at least the reasons discussed in conjunction with claim 1, we submit that claim 17 is allowable over Babitch in view of Brandt.

Claims 10-13 and 15 were rejected under 35 USC 103(a) for obviousness over Babitch in view of Brandt and further in view of Sainton (US 5,367,563). Independent claim 11 recites a modem with a base unit including “level control circuitry coupled to the transmitter that controls a level of the original analog voiceband data signal to be substantially in a linear range of the transmitter.” For at least the reasons discussed in conjunction with claim 1, we submit that claim 11 is allowable over Babitch in view of Brandt.

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Serial No. : 10/723,442
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Page : 9 of 9

Attorney Docket No.: 30024-007001

Dependent claims are allowable for at least the same reasons as the claims from which they depend.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee is believed to be due. Please apply any other charges or credits to Deposit Account No. 50-4189, referencing Attorney Docket No. 30024-007001.

Respectfully submitted,

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